All the products you need for

Engineered Kitchen Ventilation Systems.

Hoods, Fire Systems, Controls, Accessories

ACCUREX®

ENGINEERED RESTAURANT SYSTEMS

October 2013

Comfortable energy efficient kitchen ventilation starts here.

Accurex specializes in ventilation comfort—for restaurants and other food service establishments. Our top performing kitchen ventilation products reflect the industry's latest technological advances and will provide you with a fully integrated ventilation system that results in a positive, balanced building where customers and employees prefer to dine and work.

Our state-of-the-art, computer-aided product selection program (CAPS) helps you select and configure products for your system, view real-time drawings and create AutoCAD® files quickly. You'll also like the friendly, responsive customer service we provide. Your Accurex representative is just a phone call or e-mail away, and is always well prepared to help you design a ventilation system that reduces future energy and operating costs.

We listen to you, our customer, when designing our diverse product line.

Accurex believes in continuous improvement. Our engineers are constantly developing and redesigning products, responding to the needs of our customers. Extensive prototype modeling and testing results in products that have higher efficiencies with lower installation and operating costs. Accurex engineers are focused on delivering reliable and convenient products that result in a positive ventilation experience.

Reliability and top performance are assured through extensive testing.

Accurex products are comprehensively tested for structural integrity, aerodynamic performance, sound levels, mechanical operation, vibration, temperatures, environmental impact and more. Fans are tested in two on-site air chambers and a sound testing facility. Accurex products carry several certifications including AMCA, UL, NSF, and ETL.

A single source for all your kitchen ventilation needs.

Whether it's a large project or a small one, Accurex will build and deliver your entire kitchen system quickly and efficiently. Our products range from kitchen hoods, exhaust fans, dedicated make-up air, packaged rooftop units, controls, variable volume systems, fire suppression, utility distribution and more.

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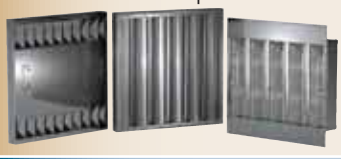
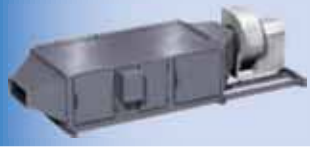
Filtration Options 	Accurex offers industry-leading grease extraction filters to match your restaurant needs.	19-27
External Supply Plenums	Accurex has a variety of solutions available to properly introduce air into the space when exhaust only hoods are being used.	28-30
Fire Suppression Systems	The first line of defense against fire in a commercial kitchen is the hood fire protection system. Accurex has a variety of factory prepiped fire protection systems available from the two leading manufacturers, Amerex® and Ansul®.	31-34
Controls/Energy Management	Accurex understands the importance of managing the various relationships between your kitchen system components, so we provide several options to control your environment.	35-40
Utility Distribution Systems	Accurex's utility distribution systems (UDS) provides flexible, convenient and safe utility connections for commercial cooking operations while saving installation time in the field.	41-44
Pollution Control 	Accurex's pollution control units provide exceptional secondary filtration - removing smoke, grease and odor from your kitchen exhaust system.	45-47

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Decision Guide... 2 Easy Steps...

1. Will you be exhausting grease-laden air or non-grease-laden air?

- **Type I Hoods:** Used if you are exhausting grease-laden air.

- **Type II Hoods:** Used if you are exhausting non-grease-laden air (heat/condensate).

2. *Type I Hoods: What style of hood do I need?*

Is your cooking equipment against a wall?

- **Wall canopy hoods:**

  Most common when the cooking battery is against a wall.

Wall Canopy Hood

- **Proximity (Backshelf) hoods:**

  Used when you have a low ceiling and/or it is to be placed over griddles and fryers, typically used in quick service restaurants.

Proximity (Backshelf) Hood

Is your cooking equipment placed in the open, like an island?

- **Single-island hoods:**

  Used when the cooking battery is in one row, not against a wall.

Single-Island Hood

- **Double-island hoods:**

  Used when the cooking battery is in two back-to-back rows, not against a wall.

Double-Island Hood

Type II Hoods: What style of hood do I need?

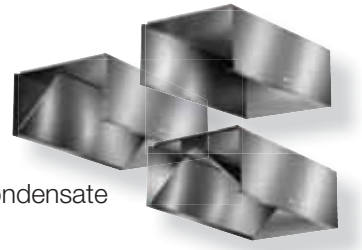
- **Heat and fume:**

  Heat only hoods are typically used for oven applications.

Heat and Fume

- **Condensate:**

  Condensate hoods are typically used above dishwashers.



Condensate

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Grease Hoods – Type I

Accurex Type I hoods are UL 710 Listed.

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Type I hoods are designed for use above grease-producing equipment and are available in several styles and configurations.

Accurex grease hoods offer the following benefits:

- Standard construction is a minimum of 18 gauge 430 stainless steel
- Hoods can be built in single section lengths from 3-16 feet
- Flexible lengths, widths and heights

  Hood lengths: Available in 1-inch increments

  Hood widths: Available in 3-inch increments
- Longer hoods are available in multiple sections and can be made to appear as one hood by utilizing our continuous capture option to improve performance and aesthetics
- Standing seam construction for superior strength
- Excellent dimensional tolerances due to highly tooled manufacturing
- UL 710 Listed and bears the National Sanitation Foundation (NSF) Seal of Approval (Standard 2)
- Rated for 400°F, 600°F, 700°F
- Includes Performance Enhancing Lip (PEL) to improve capture efficiency by turning air back into the hood

Model Number Code

The Model Number Code is designed to completely identify the unit. The correct code letters must be specified to designate the configurations and size.

XB - E - W

Hood Type
- XB - Baffle Filter
- XX - Grease-X-Tractor™
- XG - Grease Grabber™
- XK - High Velocity Cartridge Filter
- XW - Water Wash

Make-Up Air Style
- E - Exhaust Only
- D - Exhaust Only - Double-Wall Front
- F - Face Supply
- C - Face and Air Curtain Supply

Configuration
- W - Wall Style Canopy
- V - Single-Island Style (V-Bank) Canopy
- P - Proximity (Backshelf)
- R - Pizza Hood

Wall Canopy Hoods

Accurex's wall canopy hoods are used over cooking equipment that produce heat and grease-laden effluent. Wall canopy hoods are intended to be used when the cooking equipment is placed against a wall. A wide variety of sizing and hood options, along with several accessories, makes Accurex the right choice to meet your varying design requirements.

Exhaust Only

- Supply air is introduced through ceiling diffusers or external supply plenums (shown on page 28)
- More dimensional flexibility than other manufacturers

Single-Wall Front

Double-Wall Front *(see inset detail)*

- One-inch of insulation between the two front panels provides for additional strength and rigidity

Face Supply

- Supply air is introduced horizontally through the face via perforated panels in a manner that does not interfere with the cooking operation beneath the hood(s)
- Perforated panels are located on the face to ensure precise volume control and will limit the throw to within several feet of the hood(s)
- Higher level of dimensional flexibility than other manufacturers

Face and Air Curtain Supply

- Supply air is introduced horizontally through the face and vertically through the front perimeter via perforated panels in a manner that does not interfere with the cooking operation beneath the hood(s)
- Perforated panels ensure precise volume control and will limit the throw to within several feet of the hood(s)

Grease Grabber™ H_2O System Benefits

Typical grease hoods, though low-cost up front, carry many overlooked and expensive maintenance issues that can lead to high costs over their lifespan. Capturing the grease generated by cooking processes is a challenge and the clean-up of grease is both costly and time consuming.

- Proven Grease Grabber dual-stage filtration technology
- No manual filtration removal resulting in labor savings
- Filter maintenance is automatically carried out
- Programmable timer allows for cleaning to be completed on a set schedule or by the push of a button
- The Grease Grabber H_2O's recirculation method reduces hot water consumption by 50% helping to reduce operating costs

How it Works - Extracting the Grease

Grease Grabber H_2O utilizes the Grease Grabber dual stage filtration system which consists of an Grease-X-Tractor™ filter in conjunction with an Grease Grabber filter. Together, this filtration system provides the best mechanical grease extraction in the industry.

The Grease-X-Tractor is the primary filter and takes the brunt of the grease and heat. The proprietary design of the filter provides greater strength, thereby making it the best fire barrier in the industry. The Grease-X-Tractor extracts 69% of grease particles at 8 microns from the effluent airstream.

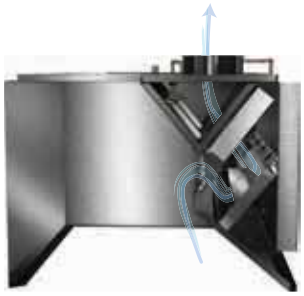
The Grease Grabber, acting as a secondary filter, uses a 1/2 inch packed bead bed to remove smaller particles that pass through the Grease-X-Tractor. Together this system removes 100% of the grease at 5 microns and larger (smoke to spatter).

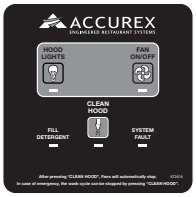
Cleaning the Hoods and Filters

The Grease Grabber H_2O's innovative auto-cleaning system is a highly efficient, closed system that combines time-saving convenience with cost reductions related to labor, water and energy use.

Upon activation of the cleaning cycle, the system fills a tank in the hood with a hot water/detergent mixture. The system washes the filter banks and plenum using specifically aimed spray nozzles located throughout the plenum area. The mix is recycled through the system by a high-efficiency pump, purged, and then the hood is rinsed with fresh hot water.

- No need for a gravity drain
- Detergent is biodegradable so waste water can be drained to a standard grease trap
- All plumbing and controls are factory-installed in an end-mounted utility cabinet for ease of installation





Grease Grabber H_2O Keypad

Water Wash Hood

Designed to reduce the labor involved in removing and cleaning filters manually, the Accurex water wash hood system self-cleans the filters in place. Nozzles spray hot water and detergent on the filter(s) cleaning the grease that has deposited on the surfaces. Additionally, nozzles are located in the plenum to clean the area behind the filters. Water wash hoods can be programmed to automatically start the cleaning process when desired or may be manually operated.

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Proximity (Backshelf) Hoods

Accurex proximity hoods have an industry-leading five dimensions of adjustment which make them the perfect solution for low ceilings and light and medium duty cooking applications. The Accurex proximity hood sits close to the cooking equipment allowing for lower exhaust rates and smaller hoods.

Proximity hoods are designed for grease- and heat-laden effluent (Type I Hood) and are shorter in height and width than a canopy hood. The name “Proximity” or “Backshelf” refers to the close proximity of the hood with respect to the cooking equipment. In addition, Accurex proximity hoods have an optional plate shelf and/or pass-over enclosure to meet your varying design requirements.

Single-Island (V-Bank) Canopy Hoods

Accurex’s single-island style canopy hoods are used over cooking equipment that produce heat and grease-laden effluent (Type I Hood). Single-island style canopy hoods are used over one row of cooking equipment placed where no walls exist. Single-island hoods can be seen from all directions and have four finished (all stainless steel) sides available in both V-bank and single-bank filter configurations. Accurex offers a variation of the single-island hood for use over pizza ovens. Contact your Accurex representative for more information.

Exhaust Only - Single-Wall

- Supply air is introduced through ceiling diffusers or external supply plenums

Face Supply

- Make-up air is supplied horizontally through the face via perforated panels in a manner that does not interfere with the cooking operation beneath the hood(s)
- Perforated panels are located on the face to ensure precise volume control and will limit the throw to within several feet of the hood

Specialty Hoods

Accurex offers many specialty hoods such as radius corners, heavier gauges and hoods with cladding. Contact your Accurex representative for more information.

Filtration Options – A variety of filtration options are available with increasing grease extraction efficiencies to suit specific needs. See Filtration Option section for more detail.

External Supply Plenums* – Several supply plenum options are available to supply air back to the space evenly. See External Supply section for more detail.

Continuous Capture* – Provides a UL Listed bolted connection allowing end to end hoods to be connected and appear as one hood.

Material Options* – Standard construction is stainless steel where exposed and galvanized steel in the unexposed plenum. 100% stainless steel construction is available. Either option is available in 300 series or 430 stainless steel.

Lighting Options* – Multiple lighting options are available. Incandescent fixtures are standard. Recessed incandescent and 2-, 3-, or 4-foot recessed fluorescent and LED fixtures are also available. All fixtures are vaporproof and UL Approved.

LED lighting provides a bright, warm light for cooking and a significantly longer operating life. LED lights save up to 95% in electrical costs when compared to using standard incandescent lights in a kitchen hood.

Tapered Hood* – For low ceiling applications, tapered fronts are available in 18-, 15- or 12-inch heights. 15- and 12-inch tapers require a 12-inch overhang on all exposed sides.

Exhaust Collars –

- **Ship Loose –** Shipping exhaust collars loose provides an exhaust collar to be used, but no exhaust cutout in the hood. This enables the contractor to locate and cut the exhaust opening where desired when not known ahead of time.
- **Shape –** To accommodate various ductwork, several sizes of rectangular and round collars are available.
- **Location* –** Top or back placement for mounted exhaust collars can go anywhere within the plenum area.

Supply Collars –

- **Additional Collars* –** To keep supply airflow velocities around the hood low, additional supply collars can be added for higher supply cfm amounts.
- **Shape (Round or Rectangle) –** To accommodate various ductwork, different sized collars are available on most supply plenums in both round and rectangular forms.

Ceiling Enclosure – When the top of the hood is mounted lower than the finished ceiling height, enclosure panels can be provided in 300 series or 430 stainless steel to match your hood. These enclosures create an aesthetically pleasing finish.

Backsplash Panels/Side Splash Panels – Provides an aesthetically desirable and easily cleanable stainless steel surface behind or on adjacent walls near the hood. Constructed of 300 series or 430 stainless steel to match the hood. Also available with 1-inch insulation.

*See options chart on page 13 for specific options for Type I Grease Hoods

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End Skirts* – End skirts are available in both full and mini configurations and are constructed with either 300 series or 430 stainless steel to match the hood. End skirts can lower required exhaust rates as they improve capture.

Airspace/Filler Panels – To assist with clearances to combustible surfaces, stainless steel airspaces can be supplied. These panels can also be used to fill in open spaces and/or improve aesthetics.

Zero Clearance* – Our clearance reduction system utilizes a one-inch wide (thick) insulating material on the front, back, sides and top of the hood as needed. This provides great value, especially in retrofit building applications allowing new hoods to be mounted closer to combustible surfaces such as cabinetry and wood roof trusses while satisfying both safety standards and codes.

Exhaust Air Balancing Baffles* – To help balance exhaust airflows between multiple ducts or hood sections being exhausted through one duct line. Air balancing baffles can be mounted at the exhaust collar openings which allow the exhaust opening to be closed up to 50%.

Switches* – Switches can be shipped loose for remote mounting, mounted on the hood face, or in the utility cabinet.

Finished Back* – With most wall canopy hoods, hanging is done against a wall making the need for an aesthetically pleasing finished back unnecessary. For instances in which the back is visible, the same finish as the other three sides of the hood can be provided.

Insulated Supply Plenum* – With some plenums, condensation can occur from bringing in cold air near to where hot air is being exhausted. By insulating these plenums, problems with condensation are alleviated. This also helps prevent cooler incoming air from being heated by warmer exhaust air.

Automatic Fire Damper* – In areas where exhaust fire dampers are required, a UL Listed motorized butterfly damper can be installed in the exhaust collar that closes at 285°F.

Utility Cabinets Hood Mount/Wall Mount* – Utility cabinets for fire system and/or control mounting can be attached to the left or right side of the hood. Remote (wall mount) cabinets are also available.

Filter Removal Tool* – Used to enable operators to safely reach and remove filters from the hood while standing on the floor in front of appliances.

Trim Strips *– Stainless steel strips that can be used anywhere hood sections meet to improve aesthetics.

***See options chart on page 13 for specific options for Type I Grease Hoods**

Options Guide	Make-Up Air Style	Wall Canopy				Single-Island (V-Bank)		Proximity (Backshelf)	Pizza Oven
		Exhaust Only		Face Supply	Face and Air Curtain Supply	Exhaust Only	Face Supply	Exhaust Only	Exhaust Only
Options and Accessories	Model	Single-Wall --EW	Double-Wall --DW	--FW	--CW	--EV	--FV	--EP	--ER
Grease Grabber™ Multistage Filtration System	XG--	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Grease-X-Tractor™ Centrifugal Filtration	XX--	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Baffle Filter	XB--	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
High Velocity Cartridge Filter	XK--	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Water Wash Hood	XW--	Optional	Optional	Optional	Optional	—	—	—	—
Horizontal Supply Plenum (HSP)	-	Optional	Optional	—	—	Optional	—	Optional	Optional
Air Curtain Supply Plenum (ASP)	-	Optional	Optional	—	—	Optional	—	—	Optional
Variable Supply Plenum (VSP)	-	Optional	Optional	—	—	Optional	—	—	Optional
Back Supply Plenum (BSP)	-	Optional	Optional	Optional	Optional	—	—	Optional	Optional
Continuous Capture	-	Optional	Optional	Optional	Optional	—	—	Optional	—
Material Options	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Lighting Options	-	Optional	Optional	Optional	Optional	Optional	Optional	—	Optional
Additional Supply Duct Collars	-	—	—	Optional	Optional	—	Optional	—	—
Tapered Hood	-	Optional	Optional	—	—	Optional	—	—	—
*Supply Collar Shape Round/Rectangle	-	—	—	Optional	Optional	—	Optional	—	—
Exhaust Collar Ship Loose	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Exhaust Collar Location (Back)	-	Optional	Optional	Optional	Optional	—	—	Optional	—
Exhaust Collar Shape	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Switches	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional	—
Ceiling Enclosures	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Utility Cabinets Hood Mount/Wall Mount	-	Optional	Optional	Optional	Optional	Optional	Optional	Wall Mount Only	Optional
Backsplash Panels/Sidesplash Panels	-	Optional	Optional	Optional	Optional	—	—	Optional	—
End Skirt	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional	—
Airspace/Filler Panels	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Zero Clearance	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Exhaust Air Balancing Baffles	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional	—
Finished Back	-	Optional	Optional	Optional	Optional	—	—	Optional	—
Insulated Supply Plenum	-	—	—	Optional	Optional	—	Optional	—	—
Automatic Fire Damper	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Filter Removal Tool	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Trim Strips	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional	—

*Round supply collars are not available on back supply plenums

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Type II hoods are designed to capture heat and/or condensate from non-grease producing appliances such as ovens and dishwashers.

Accurex heat and condensate hoods offer the following benefits:

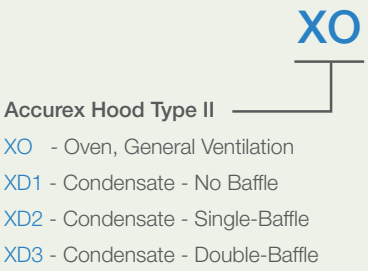
- The National Sanitation Foundation (NSF) Seal of Approval (Standard 2)
- Standard construction is a minimum of 18 gauge 430 stainless steel
- Flexible lengths, widths and heights

  Hood lengths: Available in 1-inch increments

  Hood widths: Available in 3-inch increments
- Standing seam construction for superior strength
- Excellent dimensional tolerances due to highly tooled manufacturing

Model Number Code

The Model Number Code is designed to completely identify the unit. The correct code letters must be specified to designate the configurations and size.


XO
Accurex Hood Type II
XO - Oven, General Ventilation
XD1 - Condensate - No Baffle
XD2 - Condensate - Single-Baffle
XD3 - Condensate - Double-Baffle

Non-Filtered Heat and Fume Hoods

Model XO

This hood is primarily used for ovens or general ventilation applications to capture heat and vapor, creating a more comfortable environment for the cooking staff.

Condensate Hoods

Models XD1. XD2. XD3.

- Primarily used for dishwasher or condensate applications to capture heat and vapor, creating a more comfortable environment for the cooking staff
- These hoods are constructed with a gutter and drain
- The condensate hoods are available in three styles:

No Baffles (XD1) - Most economical and flexible in condensate applications

Single-Baffle (XD2) - Designed for moderate condensation applications. Great for vertical door dishwasher applications

Double-Baffle (XD3) - Designed for heavy condensate applications

Material Options – Standard construction is stainless steel where exposed and galvanized steel in the unexposed plenum. 100% stainless steel construction is available. Either option is available in 300 series or 430 stainless steel.

Incandescent Lighting* – UL Listed vapor proof incandescent light fixtures are available.

External Supply Plenums* – Several supply plenum options are available to supply air back to the space evenly. See External Supply Plenum section for more detail.

Mesh Filter* – With most Type II hoods, the exhaust opening is exposed. Adding a mesh filter in the exhaust collar helps prevent anything other than heat and moisture from passing through the duct opening.

Exhaust Collars –

- **Ship Loose –** Shipping exhaust collars loose will provide an exhaust collar to be used, but no exhaust cutout in the hood. This enables the contractor to locate and cut the exhaust opening where desired, when not known ahead of time.
- **Shape –** To accommodate various ductwork, several sizes of rectangular and round collars are available.

Switches* – Accurex Type II hoods allow for switch mounting in a cabinet attached to the hood or as a remote option.

Ceiling Enclosure – When the top of the hood is mounted lower than the finished ceiling height, enclosure panels can be provided in 300 series or 430 stainless steel to match your hood. These enclosures create an aesthetically pleasing finish.

Trim Strips – Stainless steel strips to be used anywhere hood sections meet to improve aesthetics.

Utility Cabinets Hood Mount/ Wall Mount – Utility cabinets for fire system and/or control mounting can be attached to the left or right side of the hood. All hoods can be supplied with a cabinet to be remote mounted in the space.

Backsplash Panels/Side Splash Panels – Backsplash and side splash stainless steel sheets cover back/side walls. They provide an aesthetically desirable and easy-to-clean surface behind or on adjacent walls near the hood. Constructed of 300 series or 430 stainless steel to match the hood. Also available with 1-inch insulation.

End Skirts – End skirts are available in both full and mini configurations and are constructed with either 300 series or 430 stainless steel to match the hood. End skirts can lower required exhaust rates as they improve capture.

Airspace/Filler Panels – To assist with clearances to combustible surfaces, stainless steel airspaces can be supplied. These panels can also be used to fill in open spaces and/or improve aesthetics.

Exhaust Air Balancing Baffles – To help balance exhaust airflows between multiple ducts or hood sections being exhausted through one duct line. Air balancing baffles can be mounted at the exhaust collar openings which allow the exhaust opening to be closed up to 50%.

***See options chart on page 18 for specific options for Type II Heat and Condensate Hoods**

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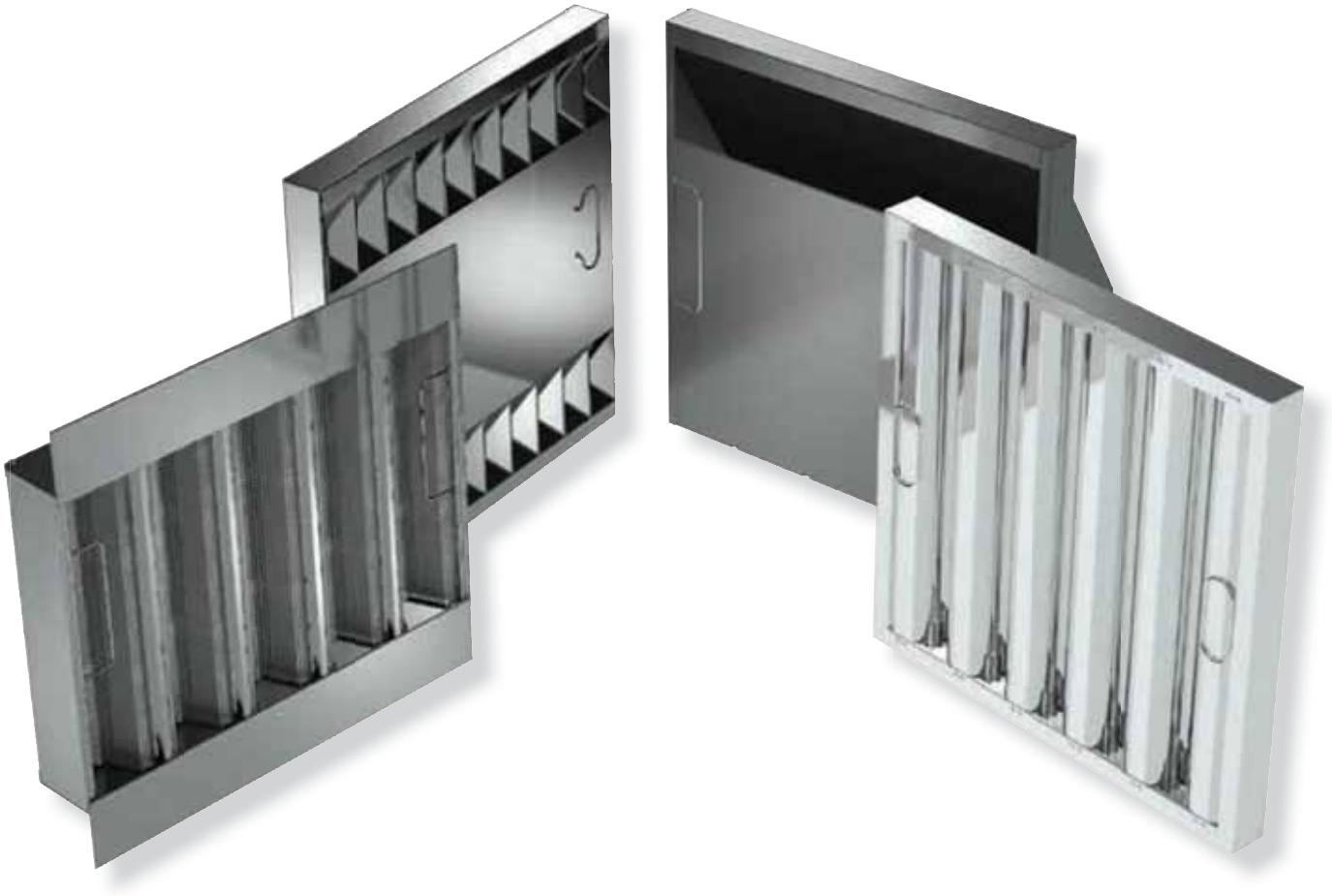
Options Guide	Heat/Oven	Condensate		
		No Baffle	Single Baffle	Double Baffle
Options and Accessories	**Model XO**	**Model XD1**	**Model XD2**	**Model XD3**
Incandescent Lighting	Optional	Optional	Optional	—
Horizontal Supply Plenum (HSP)	Optional	Optional	Optional	Optional
Air Curtain Supply Plenum (ASP)	Optional	Optional	Optional	Optional
Variable Supply Plenum (VSP)	Optional	Optional	Optional	Optional
Back Supply Plenum (BSP)	Optional	Optional	Optional	Optional
Mesh Filter	Optional	Optional	—	—
Exhaust Collar Ship Loose	Optional	Optional	Optional	Optional
Exhaust Collar Shape	Optional	Optional	Optional	Optional
Switches	Optional	Optional	Optional	—
Ceiling Enclosures	Optional	Optional	Optional	Optional
Utility Cabinets Hood Mount/Wall Mount	Optional	Optional	Optional	Optional
Backsplash Panels/Sidesplash Panels	Optional	Optional	Optional	Optional
End Skirt	Optional	Optional	Optional	Optional
Airspace/Filler Panels	Optional	Optional	Optional	Optional
Exhaust Air Balancing Baffles	Optional	Optional	Optional	Optional
Trim Strips	Optional	Optional	Optional	Optional



Accurex filters are UL 1046 Listed.

c UL US LISTED

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Accurex is the industry leader in grease filtration as verified by testing to ASTM F2519-2005 standards. This is crucial to the restaurant owner/operator because the grease generated by restaurant kitchens pose many problems; frequent duct cleaning, rooftop grease problems and compliance with tougher air emissions standards. Accurex's offering of innovative filter designs attack the problem at the source at a fraction of the cost of other grease removal devices or electrostatic precipitators.

Filter	Application	Example Appliances	Static Pressure (9 x 4 foot hood at 2050 cfm)	Grease Removal Efficiency* at 8 microns	Grease Removal Efficiency* 3-10 microns
Grease Grabber™ Multistage Filtration System	Heavy to Extra Heavy Duty Grease	Solid Fuel Cooking Appliances Upright Broiler Gas, Electric & Lava Rock Char-Broiler Mesquite Infrared Broiler Wok Chain Broiler	1.1 to 1.3 in. wg	100%	99%
Grease-X-Tractor™ Centrifugal Filtration	Medium to Heavy Duty Grease	Combination Ovens Gas & Electric Fryers Griddles Grill Up-right Broiler Electric Char-Broiler	0.7 to 0.8 in. wg	69%	51%
High-Velocity Cartridge	Light Duty Grease	Gas & Electric Ovens/ Steamers/Ranges Food Warmers Pizza Ovens	0.7 to 0.8 in. wg	42%	21%
Baffle	Light Duty Grease	Gas & Electric Ovens/ Steamers/Ranges Food Warmers Pizza Ovens	0.5 to 0.6 in. wg	28%	16%

*See Efficiency Chart in the efficiency section of filtration options

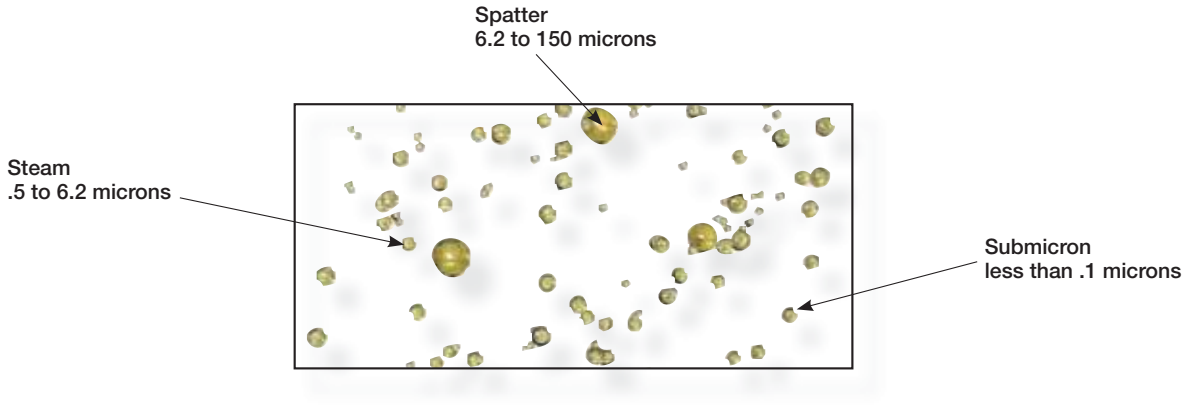
What is in my Kitchen's Exhaust?

Total kitchen exhaust includes all grease particulate sizes as well as grease vapors. Grease is the by-product of commercial cooking processes that must be extracted from the effluent airstream via the kitchen ventilation system.

Grease can be broken down into three different categories:

- Submicron particles: Produced when a drop of grease or water comes in contact with a hot surface and immediately burns off. Particle sizes range from .03 to .55 microns (smoke).
- Steam: Grease covered moisture and air mixture is produced by the long burning of cold or frozen food on a hot cooking surface. Particle sizes range from .55 to 6.2 microns.
- Spatter: Larger more visible effluent that is produced during the cooking process. Particle sizes range from 6.2 to 150 microns.

Research and testing has determined that a significant concentration of grease particles can be found in the submicron and steam phases. Most currently applied grease extraction devices remove very large grease particulate that is 10 to 150 microns in size (spatter phase), but are not capable of removing fine particulates that are found in the submicron and steam phases.



Testing of Grease Extraction Devices

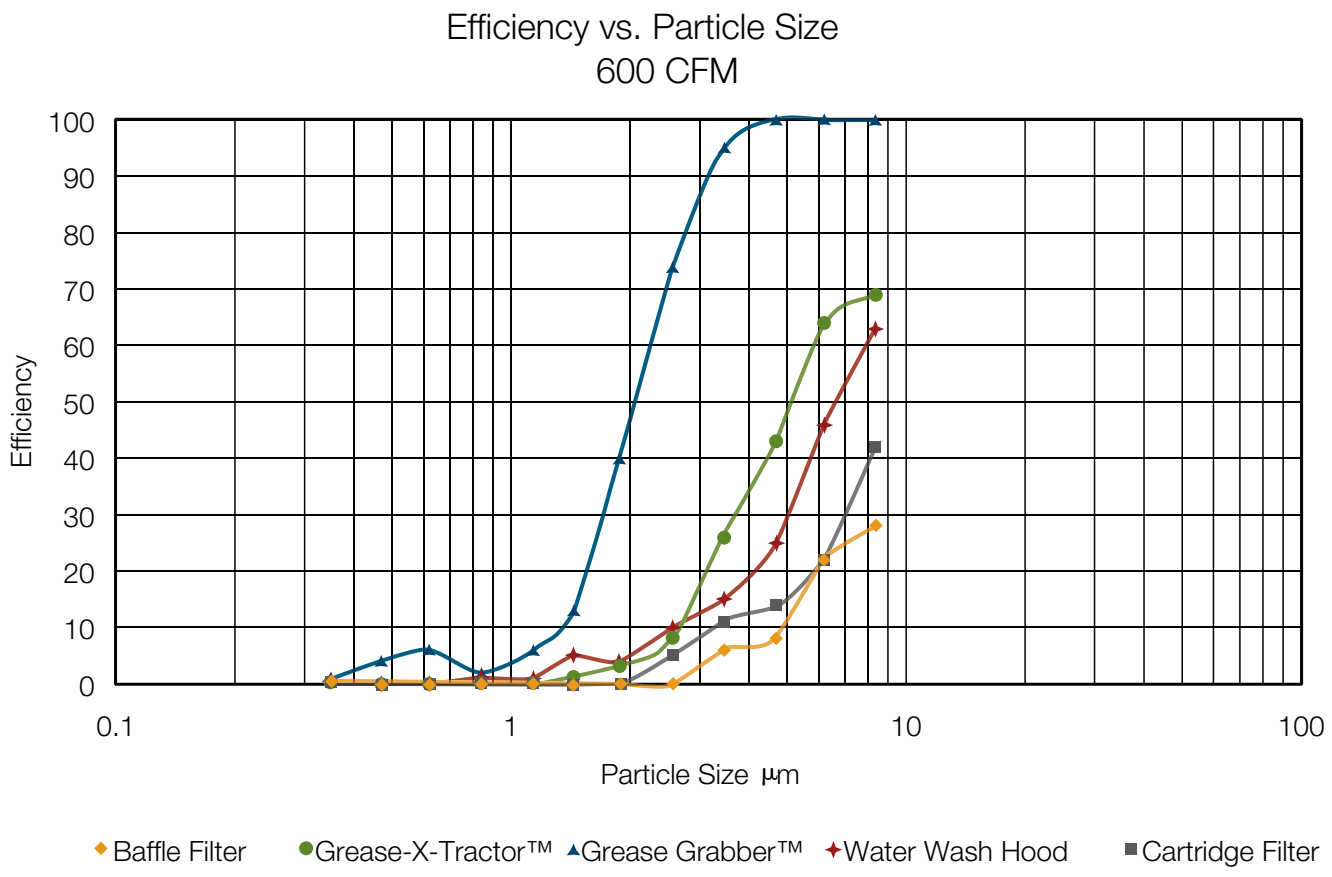
Older tests designed to test the efficiency of a grease filter did not effectively portray the full range of particles produced during the cooking operation. This led to development of a new test standard ASTM F2519-2005. This test shows the entire spectrum of the filter's efficiency from 0.3 to 100 microns. The efficiency is expressed as a graph similar to a fan curve rather than using one percentage to cover all size particles.

ASTM F2519-2005 Standard Test Method for Grease Particle Capture Efficiency of Commercial Kitchen Filters and Extractors is the first universally accepted test method in the commercial kitchen ventilation industry that covers efficiency testing of both removable filters and fixed extractors such as water wash hoods.

ASTM F2519-2005 tests generate a controlled quantity of particles in size ranges from .3 to 10 microns that are released into a kitchen hood to represent the cooking effluent. The particles are then sampled and counted downstream in the ductwork with an optical particle counter with and without the extractor in place. These are used to calculate the fractional efficiency graphed versus the particle size.

The efficiency graphs that Accurex uses reflect the test methods used in ASTM F2519-2005.

Accurex Efficiency Chart



Grease Grabber™ Multistage Filtration System

The Grease Grabber dual-stage filtration system uses the Grease-X-Tractor along with the Grease Grabber filter to remove 100% of the grease particles, at 5 microns and larger, out of the airstream. The Grease Grabber filter is designed for heavy-duty grease applications.

How it works:

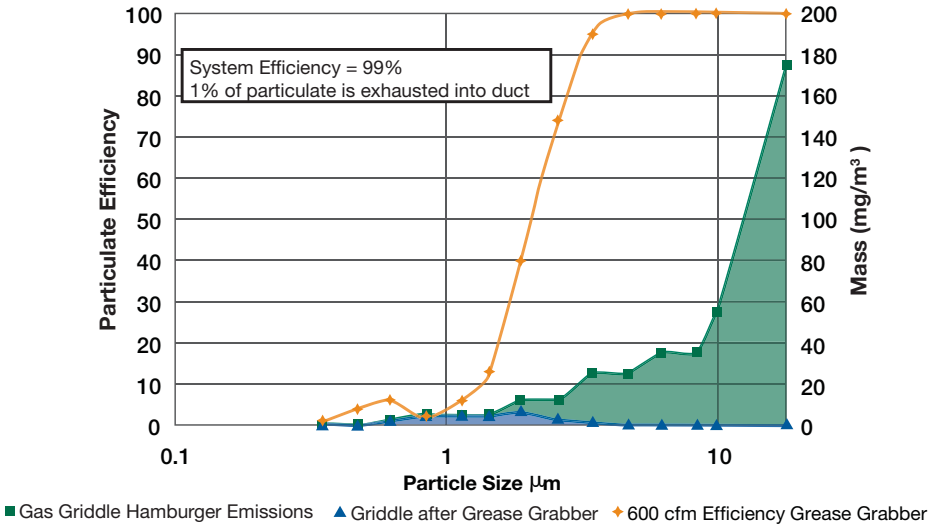
The Grease-X-Tractor is the primary filter that removes large grease particles using centrifugal force.

The Grease Grabber is the secondary filter that uses a ½-inch packed bead bed to remove the small particles of grease that are not removed by the Grease-X-Tractor filter.

Grease-X-Tractor with Grease Grabber removes 100% of the grease particles at 5 microns

- Tested to ASTM F2519-2005
- UL 1046 Listed
- NSF Certified

Mass & Grease Extraction Efficiency vs. Particle Size
Grease Grabber™ Over Griddle with Hamburger

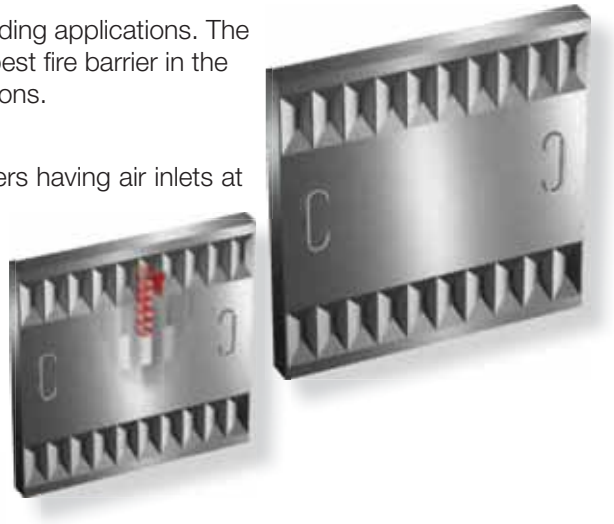


See Third-Party Grease Extraction Efficiency Verification on page 27

ACCUREX® ENGINEERED RESTAURANT SYSTEMS

Grease-X-Tractor™ Centrifugal Filtration

The Grease-X-Tractor filter is the ideal filter for medium grease loading applications. The design of the filter gives the filter great strength and makes it the best fire barrier in the industry as well as removing 69% of the grease particles at 8 microns.



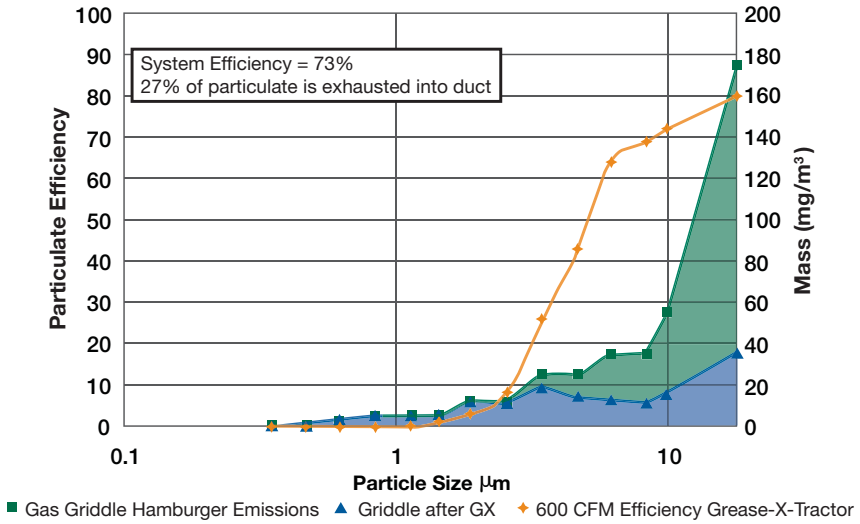
How it works:

- The Grease-X-Tractor filter consists of individual vortex chambers having air inlets at the top and bottom front of the filter.
- Air travels in a helical or corkscrew like path through the filter chambers, subjecting the grease particulate to centrifugal force.
- Grease collects on the interior walls of the filter, where it drains into the hood grease trough and grease cup.

The Grease-X-Tractor removes 69% of the grease particles at 8 microns

- Tested to ASTM F2519-2005 standard method of test
- UL 1046 Listed
- NSF Certified

Mass & Grease Extraction Efficiency vs. Particle Size
Grease-X-Tractor™ Over Griddle with Hamburger



See Third-Party Grease Extraction Efficiency Verification on page 27

High Velocity Cartridge

The high velocity cartridge is designed for light-duty grease applications.

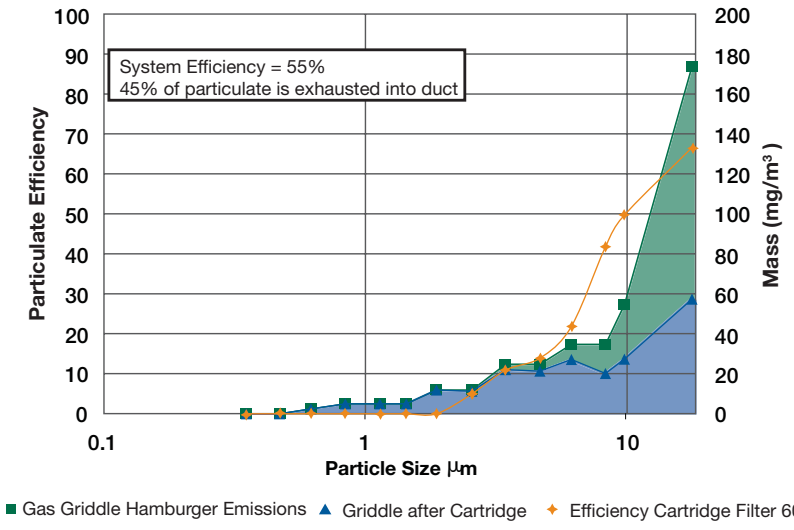
How it works:

- Exhaust or contaminated air passes through the high velocity stainless steel cartridge.
- As the air turns, the particle's momentum throws the particle out of the airstream as it changes direction, causing the particulates impact upon the cartridge.
- The grease then runs down the cartridge into the grease trough which drains into a removable grease container.

- Tested to ASTM F2519-2005 standard method of test
- UL 1046 Listed
- NSF Certified

The high velocity cartridge filter removes 42% of particles at 8 microns

Mass & Grease Extraction Efficiency vs. Particle Size
Cartridge Over Griddle with Hamburger



See Third-Party Grease Extraction Efficiency Verification on page 27

ACCUREX® ENGINEERED RESTAURANT SYSTEMS

Standard Baffle

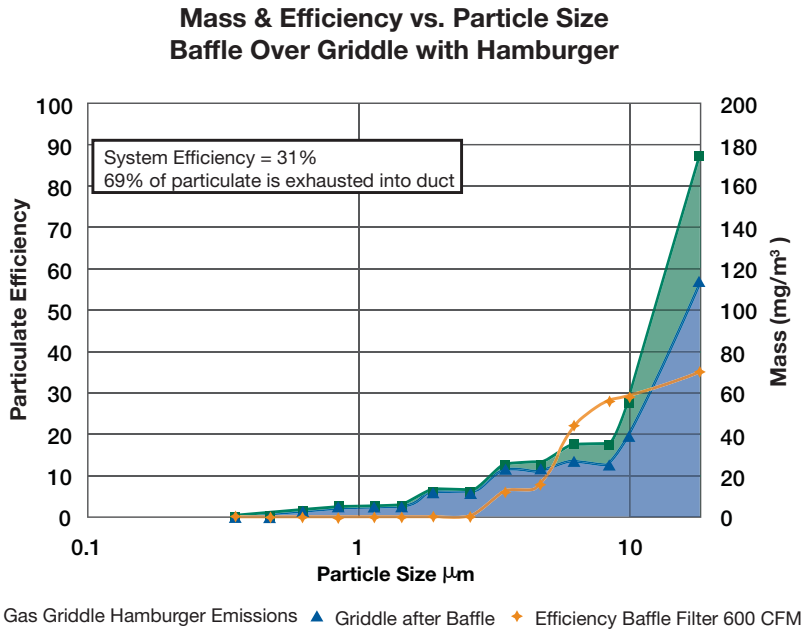
The industry standard baffle filter is designed for light-duty grease applications.

How it works:

- Exhaust air passes through the aluminum/stainless steel baffles.
- As the air turns, the particle's momentum throws the particle out of the airstream as it changes direction the particulates impact upon the baffles.
- The grease then runs down the baffle into the grease trough which drains into a removable grease container.

- Tested to ASTM F2519-2005 standard method of test
- UL 1046 Listed
- NSF Certified

The baffle filter removes 28% of particles at 8 microns

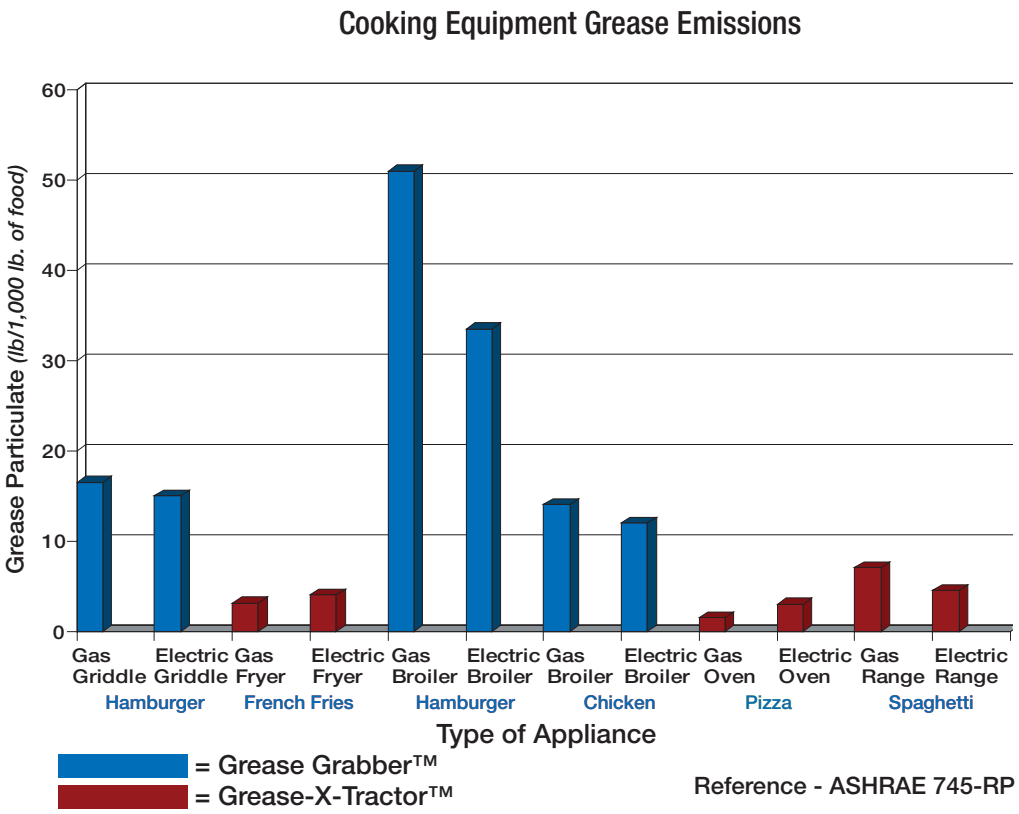


See Third-Party Grease Extraction Efficiency Verification on page 27

Grease Extraction by Cooking Equipment Type

Different appliances and types of food will produce different amounts of grease. There is a need for different levels of grease extraction efficiency.

Accurex recommends filters for each type of cooking equipment. If there is a diverse cooking lineup, use a worse case scenario for the type of filter used.



*Third-Party Grease Extraction Efficiency Verification

The previous charts show the amount of grease that is extracted by a typical baffle filter, cartridge filter, Accurex's Grease-X-Tractor, and Accurex's Grease Grabber filtration system. The charts also show the amount of grease that passes through the filter and into your exhaust duct, exhaust fan and onto your roof.

This data was gathered by a third-party testing agency while cooking beef patties on a griddle. The cooking of beef patties on a griddle yields the largest mass of grease particles at ~18 microns in size and the smallest at ~.2 microns in size (human hair ~100 microns).

The blue area represents the amount of grease that passes through the filter. The green area represents the amount of grease extracted by the filter. The more green area there is, the more grease that is extracted at the filter. The orange efficiency line shows the efficiency of the filter for a specific particle size.

External Supply Plenums
Model Overview

Make-up air can be introduced several ways, including through-the-hood with an integrated supply plenum or an external supply plenum. External plenums positioned around the perimeter of exhaust only hoods are a great alternative to integral supply plenums. Unlike integral supply plenums, they do not sacrifice valuable hood containment area. They can also be retrofitted to almost any hood and are generally less expensive than integral plenums. Accurex offers four external supply choices - Air Curtain Supply Plenum (ASP), Horizontal Supply Plenum (HSP), Variable Supply Plenum (VSP), and the Back Supply Plenum (BSP).

Standard construction features:

- 18 gauge 430 stainless steel
- Perforated discharge panels (23% open)
- Supply plenums are available in lengths from 3 to 16 feet where additional lengths require multiple plenums

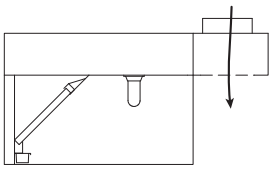
Plenum Type	Discharge Opening (Inches)	Recommended Supply Rate (cfm/ft)	Recommended Application
Air Curtain Supply (ASP) 14-inch or 24-inch	14-inch: 12 24-inch: 22	14-inch: Up to 110 24-inch: Up to 145	Non-Tempered/Heat Only* To minimize mixing with air in the space by distributing airflow at the hood, downward.
Horizontal Supply (HSP)	15.5	Up to 150	Tempered Air (Heated and Cooling)* Provides supply air to mix with room air.
Back Supply (BSP)	6	Up to 145	Non-Tempered or Marginally Tempered Air Air is kept near hood to minimize mixing with air in the space.
Variable Supply (VSP)	Face 8 Curtain 8	Face Up to 160 Curtain Up to 80	Non-Tempered or Marginally Tempered Air Air is kept near hood to minimize mixing with air in the space.

* Climate determines tempering conditions.

Air Curtain Supply Plenum (ASP)

Air curtain supply plenums are typically used in non-tempered or heat-only applications, depending upon climate (can be used as an efficient method for spot-cooling).

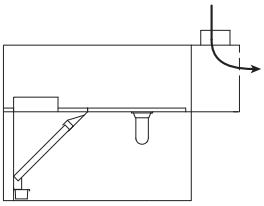
- Air curtain supply plenums introduce the air near the hood to minimize mixing with air in the space
- A series of perforated panels evenly distribute air at lower discharge velocities which benefit hood capture and containment
- Easy and flexible installation
- Mounted 14-20 inches above the bottom edge of the hood or flush with a drop ceiling
- External plenums can be placed on multiple sides of the hood to create a curtain of air on all exposed sides and increasing the volume of air brought in at the hood
- The ASP is 14 or 24 inches wide by 10 inches high



Horizontal Supply Plenum (HSP)

Horizontal supply plenums are typically used in fully tempered air applications since the air will mix with the air in the surrounding space.

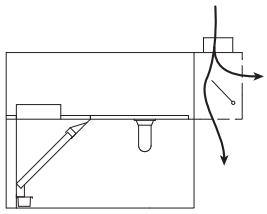
- Make-up air is introduced horizontally through the face of the external supply plenum via perforated panels in a manner that does not interfere with the cooking operations beneath the hood(s)
- Perforated panels are located on the face of the external supply plenum to limit the throw to within several feet of the hood(s) and maintain laminar flow
- Easy and flexible installation
- The HSP is typically mounted flush with the top of the hood
- The HSP is 12 inches wide by 18 inches high



Variable Supply Plenum (VSP)

The variable supply plenum is a versatile plenum combining the features of the face and air curtain supply plenums.

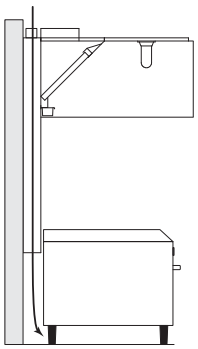
- Make-up air is supplied horizontally through the face and vertically through the front perimeter via perforated panels in a manner that does not interfere with the cooking operations beneath the hood(s)
- Easy and flexible installation
- Manual damper is included in the plenum to modulate airflow between the face and air curtain allowing 0 to 50 percent through the air curtain and 50 to 100 percent through the face
- Best suited for cooler climates where outside air can be used to cool the kitchen (although either tempered or non-tempered air can be used depending on climate and comfort goals)
- The VSP is 12 inches wide by 18 inches high



Back Supply Plenum (BSP)

Back supply plenums are typically used in non-tempered or marginally tempered applications, and these plenums are also ideal for heating air during the colder months since hot air will rise from its low discharge position.

- An effective way to introduce make-up air into the kitchen is from the rear of the hood through a back supply plenum (double layer of perforated panels allow for well-distributed low-velocity airflow at discharge behind and below the cooking battery)
- Back supply plenums also function as a backsplash panel and provide the proper clearance to limited combustibles needed in many installations to meet NFPA 96 standards
- Easy and flexible installation
- This plenum directs airflow through perforated panels behind and below the cooking equipment without affecting capture and containment, cooking surface temperature, or pilot lights
- When using non-tempered air, utilizing low air velocities will keep the air near the hood
- These plenums are 6 inches deep and stretch the entire length of the hood and discharge at 31.25 inches above the finished floor



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Code Information

The Restaurant Fire Suppression System is constructed in compliance with the following:

- National Fire Protection Association (NFPA) Bulletin #96 and #17A
- UL Standard 300 Listed
- UL Standard 2092 Listed (Piranha)
- International Association of Plumbing and Mechanical Officials (IAPMO) Interim Guide IGC 113-07
- ISO 9001-2000

ACCUREX® ENGINEERED RESTAURANT SYSTEMS

The first line of defense against fire in a commercial kitchen is the fire protection system installed in the exhaust hood. Accurex has a variety of factory prepiped fire protection systems available from the two leading manufacturers, Amerex® and Ansul®.

Added value in choosing an Accurex factory-installed fire suppression system:

- Convenience - Accurex coordinates all of the fieldwork saving you valuable time
- Factory prepiped systems require less jobsite installation time, freeing up factory space for other work to be completed
- Includes application for permits and performing puff tests
- Factory-installed systems are much more aesthetically pleasing
  - Allows for a streamlined setup that will not interfere with the kitchen workflow
  - Factory systems look finished and professionally done
  - No unsightly holes or pipes that create an eyesore

Fire Suppression Model Code

The Model Code below is designed as a brief overview of the options that Accurex provides for Fire Suppression Systems.

Model	Fire Suppression Category
Amerex® KP	Appliance Specific
Amerex® Zone Defense	Overlapping Coverage
Ansul® R-102™	Appliance Specific
Ansul® R-102™ Overlapping	Overlapping Coverage
Ansul® Piranha™	Dual Agent

Amerex

Restaurant fires can be devastating. A fire can begin on an appliance, in the hood or ductwork, and quickly spread to the building. A pre-engineered fire suppression system is the first line of defense against a restaurant kitchen fire. Amerex has been in the fire protection industry since 1971 and has a reputation for excellence, customer service and innovation unsurpassed in the industry.

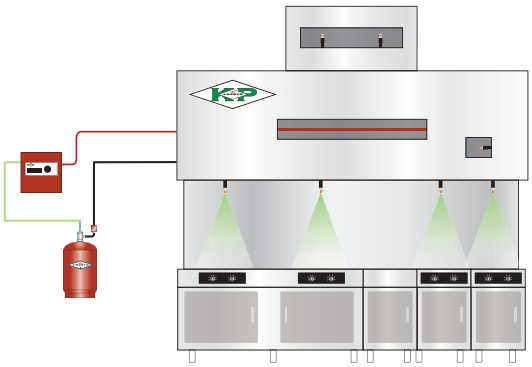
Quality is Behind the Diamond

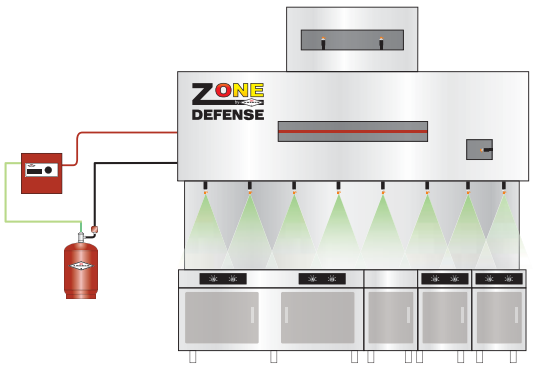
Amerex KP Fire Suppression Systems

Appliance specific fire suppression is a wet chemical system to be used when the equipment placement is known and expect few, if any, changes. Nozzles are selected and aimed at specific hazards on each appliance. The chemical agent itself a low pH that's non-corrosive to stainless steel which can be safely cleaned up with water and a sponge.

Amerex Zone Defense Fire Suppression Systems

The full flood/overlapping restaurant fire suppression systems were developed to solve the real world problem of how to protect a kitchen where the appliances are moved around, rolled in and out for cleaning, or replaced with different appliances to accommodate changing menus. These systems are also cost effective with medium and heavy duty cooking lines requiring greater protection.





Features and Benefits

- Stainless agent tank enclosures – provide a professional look
- Fusible link or pneumatic tubing detection - flexibility to suit design requirements
- Additional switches (two SPDT is standard) – for additional equipment shutdown as required
- Additional pull stations (one is standard) – for large rooms with multiple exits
- Metal blow off caps - for high heat applications
- Horn strobes - for visual and audible emergency notification
- Low pressure alarm – helps prevent a false discharge due to pressure loss
- K-Class handheld extinguishers – to meet NFPA 96 code requirements

The Restaurant Fire Suppression System is constructed in compliance with the following:

- UL/ULC Listed per UL 300 fire test specifications
- New York City Department of Buildings (MEA)
- Meets requirements of NFPA 96 (Standard for the Installation of Equipment for the Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment)
- Meets requirements of NFPA 17A (Standard on Wet Chemical Extinguishing Systems)
- ISO 9001:2000 and ISO 14001:2004 certified

ACCUREX
ENGINEERED RESTAURANT SYSTEMS

Ansul

Ansul has been protecting restaurants since 1962 and is one of the industry leaders in fire suppression systems,

Ansul led the industry at a time when kitchen fires were a leading cause of restaurant loss, and their continued advancements in technology and design have made Ansul the number one foodservice fire protection solution in the world.

Ansul R-102 Fire Suppression System

In an appliance specific fire system, the nozzles and placement are chosen for the type of cooking equipment it needs to protect. This is the most cost-effective system, as only the appliances that need protection are covered.

Ansul Piranha Fire Suppression System

Dual agent fire suppression systems combine water and chemical agent to suppress the fire. The agent is discharged first, suppressing the fire, and water follows to cool the hazard and prevent reflash. Dual agent systems can be either appliance specific or full flood.

Options and Accessories

- Stainless tank enclosures – provide a professional look
- Flexible agent distribution hose so appliances can be rolled out for cleaning
- Additional switches (two SPDT is standard) – for additional equipment shutdown as required
- Additional pull stations (one is standard) – for large rooms with multiple exits
- Metal blow off caps - for high heat applications
- Horn strobes - for visual and audible emergency notification
- K-Class handheld extinguishers – to meet NFPA 96 code requirements

The Restaurant Fire Suppression System is constructed in compliance with the following:

- UL/ULC Listed per UL 300 fire test specifications
- New York City Department of Buildings (MEA)
- Meets requirements of NFPA 96 (Standard for the Installation of Equipment for the Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment)
- Meets requirements of NFPA 17A (Standard on Wet Chemical Extinguishing Systems)
- ABS - American Bureau of Shipping

Accurex Variable Volume Systems are UL Listed to Standard 891

Accurex XFCC is UL Listed to Standard 891.

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ACCUREX® ENGINEERED RESTAURANT SYSTEMS

Accurex understands the importance of managing the various relationships between your kitchen systems. It is because we understand your needs, we provide many options to match your systems needs.

Fan Control Center

Accurex's fan control center manages all of the various power connections and relationships between the hoods, fans, make-up air and lighting from a single source. This makes controlling your kitchen systems much easier through one-stop control.

Vari-Flow Demand Controlled Ventilation

We realize that cooking loads vary throughout the day. Rather than having a fan and make-up air run constantly, all day long at 100%, we offer a variable volume ventilation system that tracks the cooking load and varies the exhaust and supply rate based on need. Thus, reducing operating costs primarily through decreasing temperature loads and energy required to move air.

Temperature Interlock

Accurex's temperature interlock is designed and installed to automatically activate the exhaust fan(s), if not manually started, whenever cooking operations occur. The temperature interlock activates the fan(s) when cooking exhaust reaches the preset temperature. This control satisfies IMC code 507.2.1.1. It is also an option on our fan control center and standard on variable volume controls.

Digital Temperature Interlock

The temperature interlock is designed to automatically start the kitchen hood exhaust fans and keep them running while heat is being generated from the cooking appliances. The interlock will override the switch and start the fans once heat is detected in the event an operator fails to turn on the fans manually—ensuring safety and code compliance. These systems are available as a stand-alone control or as an integrated option in our other pre-engineered controls.

- Easily Adjustable - Digital Temperature Interlock adjusts the temperature set point through an accessible digital display or thermostat control utilizes a sensor with set dial screw on the back to adjust the temperature. This can be advantageous when trying to control several sensors, as they can be connected in parallel back to one small control
- Versatile - Use with both Type 1 and Type II hoods
- Automatic Activation - Exhaust fans start when cooking equipment generates heat
- Quick Installation - Pre-installed or shipped ready for installation
- Cycling Prevention - Prevents fan from cycling on and off during variable cooking periods by use of temperature delay control, which keeps exhaust fans running until temperature drops below and remains below a given set point.
- Automatic Shut Down - Turns off exhaust fans automatically once the temperature has dropped below the safety set point and remains there.
- Efficient - Maximize efficiency by using one temperature interlock package per hood system (each temperature interlock activates all fans linked to system simultaneously)

Temperature Interlock

Accurex's temperature interlock is designed and installed to automatically activate the exhaust fan, if not manually started, whenever cooking operations occur. The activation of the exhaust fan occurs through a temperature probe that detects an increased temperature and activates the fans. Accurex offers a stand-alone package as well as an option on our fan control center XFCC.

Stand-Alone Package Features:

- Temperature probe with adjustable temperature setting is factory-mounted in the exhaust collar
- Shipped loose for field installations for ship loose collars and J-box with open back and cover
- 8 in. x 8 in. relay box
- Single-Pole Double-Throw (SPDT) relay 1-100 minute time delay
- Terminal strip

Typical mounting locations:

- Hood top
- Utility cabinet (Hood or Remote)
- Utility distribution system (UDS)
- Remote

- Optional Switches
- Meets IMC code 507.2.1.1

Fan Control Center

Fan control centers manage the various power connections and relationships to other equipment. This can be a challenge. The Accurex fan control center (XFCC) allows you to manage them from one location, with well-labeled connections and a variety of options to reduce installation and coordination time at the jobsite. (The XFCC is prewired. Minimal field wiring is required for the main power and connection to fans and lighting.) This eliminates the often complex field wiring that can lead to mistakes and job delays resulting in failed inspections. The XFCC offers clean, safe, and dependable control for the kitchen fans and hood lights. A variety of options are available.

Standard Construction Features:

- Prewired
- UL Listed to Standard 891
- Magnetic motor starters
- Light & fan switch mounted on door (wall mounted only)
- Numbered terminal strip
- Color coded wiring with diagram mounted inside door
- Exhaust on in fire mode
- Thermal overloads in cabinet

Fan Control Center Options

Trim Ring — Cosmetic feature designed to trim out the XFCC when recessed into the wall.

Removal of Starter When Supplied in Unit — Option used when the starter for the fan is already supplied.

Up To 2 Status Lights — Lights that indicate a specific function is on. These lights can be either 24 Volt or 120 Volt.

Up To 2 Extra Fire Relays — Two optional fire relays to hook-up to other features as needed.

Lights Out in Fire — Connecting lights with this option will shut lights off in the event of a fire.

Supply Fan Failure Indicator Light — Lights up when the supply fan fails.

Exhaust Fan Failure Indicator Light — Lights up when the exhaust fan fails.

Single Light/Fan Switch — One switch that turns on all lights and fans.

Power For Shunt Trip — Prewired at the factory to provide power to shunt trip. This option eliminates the need for field hook-up.

Automatic Damper Switch — Reset switch that opens the damper up again after fire triggered the damper to close.

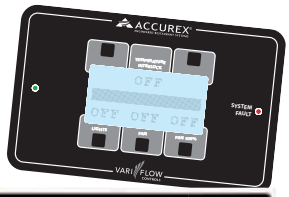
Temperature Interlock — Designed and installed to automatically activate the exhaust fan, if not manually started whenever cooking operations occur. (See temperature interlock section for details).

Variable Volume

Saving energy is as simple as recognizing that cooking loads vary throughout the day. Accurex's Vari-Flow Controls detect these changes in cooking activity and modulate the exhaust and supply air based on demand, thereby saving energy and reducing operating costs.

The Accurex Vari-Flow Air Management System utilizes strategically placed heat sensors to effectively monitor the cooking operation and quickly adjust airflow to meet the demand. Reducing energy during slower periods of the day reduces electrical energy consumption and decreases heating and cooling loads–all significantly reducing operating costs. See Figures 1-3 on the next page.

Features Exceptional Turndown



Industry-leading turndown capabilities on both exhaust and tempered make-up air of up to 50%, resulting in up to 90% electrical savings and additional heating and cooling savings.

User Interface Keypad

- Membrane keypad to control fans, lights, manual override conditions and identify system events.

User Interface Touchscreen with Digital Displays

- An intuitive, high-resolution touchscreen user interface with a simple tablet-based navigation.
- Independent fan and light control to consolidate systems and maximize both first cost and operating cost savings.
- Live system operation dashboard to monitor energy savings throughout the day as well as historical trending.

Capture Tank Mounted Temperature Sensor

Responds up to 5 times faster than duct mounted temperature sensors when sensing temperature change for excellent control and more efficient operation.

Space Pressure Control

Vari-Flow has an option to control the supply air unit by sensing static pressure in the space, independent of the exhaust fan speed, to ensure proper room pressurization at all times.

Melink® Intelli-Hood®

The Melink® Intelli-Hood® uses both heat sensors and optic sensors to monitor the cooking operation and modulate the airflow. The optic sensors provide additional control, especially in large cooking batteries containing steamers, kettles and other similar appliances that produce a lot of smoke or steam.

Product Features & Advantages:

- **Optic Sensors** - In addition to a primary temperature sensor in the duct collar, the Intelli-Hood system includes optic sensors to sense steam and/or smoke being generated from the cooking process. When as little as seven percent of the optics infrared beam is blocked, the exhaust fans are sent to full speed to capture the effluent.
- **Professional Service** - Melink includes a factory start-up with the purchase of their system. This start-up includes a site visit from a Melink field technician to ensure that the system is installed correctly and programmed based on the application. The technician will also provide basic training to operators present during the start-up.
- **Control Large Systems** - The system is designed to easily handle larger systems and can be easily programmed and monitored from its keypad control.
- **Increased Savings** - Reduces airflow by 50% or more during idle cooking periods generating more electrical, heating and cooling savings.

Variable Volume

The charts below are an example of how the cooking load in a typical restaurant varies throughout the day and how the temperature only variable volume system can work with the load and save money.

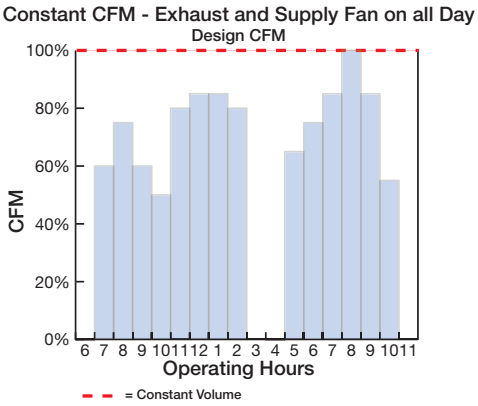


Figure 1 — In a typical kitchen, the ventilation equipment runs at the maximum cfm through the entire day based on a peak load calculation. Expensive tempered air is exhausted and supplied regardless of the cooking load. The red line is showing fan operation at 100% regardless of cooking load.

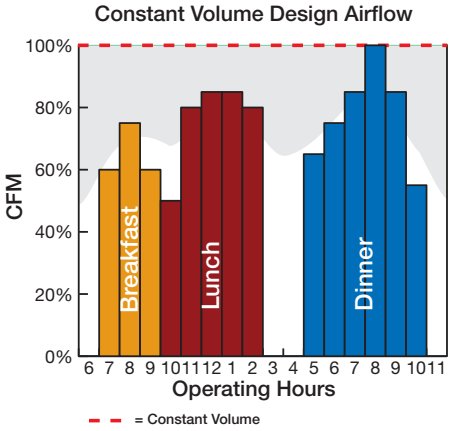


Figure 2 — The cooking load through out the day varies significantly. The maximum ventilation requirements of the kitchen operation only account for a small percentage of the day. The shaded area in Fig. 2 represents the savings potential for variable volume. The red line is showing fan operation at 100% regardless of cooking load.

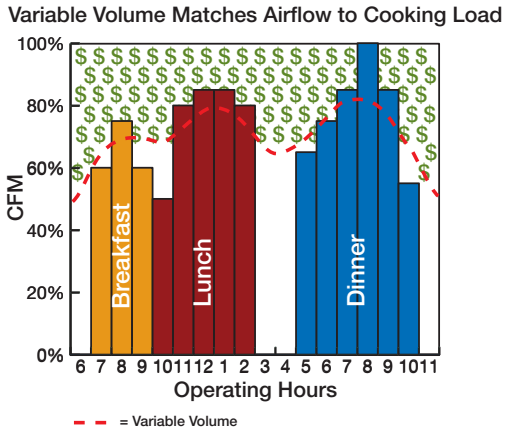


Figure 3 — A variable volume system will track the cooking load (red line) and vary the exhaust and supply ventilation. The area above the red line represents energy savings. The chart is an example of a daily cooking load.

For responsibilities and start-up processes go to www.accurex.com.

Accurex Utility Distribution Systems are UL 891 Listed.

US LISTED

ACCUREX®
ENGINEERED RESTAURANT SYSTEMS

Accurex's Utility Distribution Systems (UDS) provide flexible, convenient and safe utility connections for commercial cooking operations while saving installation time in the field. Factory-built systems offer a cost-effective way to replace contractor built utilities in walls which require a lot of time and energy spent coordinating with various trades. They also allow for future expansion or relocation of appliances without expensive modifications. The Accurex UDS provides a single point of connection for gas, electricity, water and optional utilities. The stainless steel exterior is easy to clean and safely conceals all wiring. Utility distribution systems are available in wall and island styles and can be manufactured in incremental lengths, expandable to accommodate virtually any cooking line-up.

Benefits of an Accurex UDS

- Flexibility
- Fast installation
- Cost-effective
- Convenient
- Mobility
- Safety
- Expandable
- Custom units are available

Model Number Code

The Model Number Code is designed to completely identify the unit. The correct code letters must be specified to designate the configurations and size.

I	II	III		IV		V
XM	I	V	-	GHC	-	15-6

	Designation	Description		Designation	Description
I	XM	Standard	IV	G	Gas
	XU	Custom		H	Hot Water
				C	Cold Water
II	I	Island		O	Filtered Water
	W	Wall		L	Chilled Water
	C	Chase Only		S	Steam/Condensate Return
	O	Overhead		A	Air, Compressed
	E	Electric Pole		D	Drain and Vent
	U	Utility Column		F	Fire System
				K	Fan/Hood Controls
III	B	Buss Bar		P	Prison Package
	H	Horizontal Cable		N	None
	V	Vertical Cable			
	R	Receptacles Only	V	Unit Length	Feet-Inches
	N	None			

Standard Construction Features

Configuration:

- 16 gauge 300 series stainless steel where exposed
- Wall or island style units are available for positioning against a wall or between hoods
- Flexible length units are manufactured in 1-inch increments starting at 8 feet to unlimited
- Unit width standard 12 inches or an optional slim line unit of 6 inches
- Riser length standard 24 inches and available in one-inch incremental lengths from 12 to 48 inches
- Field joints bolt together with stainless steel pedestal on the chase
- Filler panels provided to finish area between hoods and utility distribution system yielding a professional and finished appearance

Gas:

- Main gas line standard 2-inch diameter. 1¼- or 1½-inch lines are available as options
- Gas configuration: Gas lines are provided entering the system through one riser. (For longer units, looped gas will be provided).

Water:

- Hot and cold water. Insulated 3/4 or 1-inch diameter line provided

Electrical:

- Fan and light switches are standard, based on need
- Convenience receptacle 120/1 - 20A GFCI is provided on the end of each riser

Configuration

Chase Style – Standard flat top. Peaked optional.

Riser Termination – An adjustable height collar (78- to 84-inch) is provided. If required, an optional riser extension is available at specified heights.

Special Configurations – are available, please contact your Accurex representative for details.

Gas

Drop Size – Alternating ¾ and 1¼ are standard and placed every 12 inches. Capped for future if not being used.

Quick Disconnect Hoses – Provides an easy method of connecting or disconnecting gas lines (available in 48-, 60-, and 72-inch lengths).

Restraint Cables – Prevents cooking equipment from being moved without disconnecting the gas line.

Main Ball Valve – On incoming service to turn gas off at the unit.

Fire System Gas Valve – Mechanical or electric with manual reset gas valves can be mounted in the unit to turn off gas in fire mode.

Battery Backup For Gas Solenoid – Is available for your gas utilities.

Ball Valves – Available in ½-, ¾-, 1- or 1¼-inch for shut off at each connection along the chase.

Water

Main Ball Valves – On incoming service to provide a main shutoff at the unit

Gauges – Available for either pressure/temperature or pressure only.

Fill Faucet – With 60-inch hose.

Water Hoses – Available in lengths of 48-, 60- or 72-inches.

Water Filters – Available in single appliance and multiple appliance styles.

Hot and Cold Water Drops – ¾-inch diameter and placed every 24 inches.

Shock Arrestors – To prevent water hammering that typically occurs when the water is shut off.

Pressure Reducing Valve – Is used when the water pressure entering the UDS is too high. The reducer valve reduces the pressure to an appropriate level (typically 40-60 psi).

Hand Sink – Mounted on the riser is available. Sink is 12 inches wide.

Hose Reel Assembly – Mounted on one of the risers and is available for auxiliary hoses.

Ball Valves – Available from ¼-, ⅜-, ½- and ¾-inch for shut off at each connection along the chase.

Electrical

Primary Electrical Service – Choose from panel board or point-of-use breakers. Main breaker and branch breakers are provided with primary electrical service. See table for available sizes.

Breaker	Voltage	Phase	Min Size (Amp)	Max Size (Amp)
Main	120 or 208	1	40	400
Branch	120	1	20	50
Branch	208	1	20	70
Branch	208	3	20	125

Electrical Receptacles – 120 Volt or 208 Volt based on need and the receptacles. NEMA configuration is straight blade with an available twist lock option in 120/1-20A GFCI (GFCI not available with twist lock). Optional cordset is available.

Controls – For the primary electrical service option that includes optional status lights, fire system connection, optional light or fan (switches), gas solenoid control panel (with a solenoid gas valve), optional emergency shutdown and prewired tempering switch (if required).

Secondary Electrical Service – Choose from panel board or point-of-use breakers. Main breaker and branch breakers are provided with secondary electrical service. See table for available sizes.

Breaker	Voltage	Phase	Min Size (Amp)	Max Size (Amp)
Main	480 or 208	3	40	400
Branch	120	1	20	50
Branch	208	1	20	70
Branch	208	3	20	125
Branch	480	3	20	100

Additional Utilities and Options

- Steam / condensate system
- Chilled water line with insulation
- Compressed air line
- Gasketed construction
- Weatherproof receptacle / switch covers
- While-in-use receptacle covers
- 12 x 12-inch viewing window in riser
- Hinged access doors on risers
- Water filter bracket on chase
- 10 foot conduit for wiring to hood lights
- Ground fault equipment protection
- XFCC mounted in riser
- Variable volume system mounted in riser
- Temperature interlock mounted in riser

Grease Grabber™ Pollution Control Units

With the increasing size of the urban landscape, the focus on clean air, and multi-use buildings, restaurant odor control and grease control play an increasingly important role in commercial kitchen exhaust systems.

No one wants their apartment or hotel room smelling like the restaurant below or their windows smeared from greasy kitchen exhaust air. In addition, restaurants on the ground floor of a high rise building need a cost-effective way to discharge closer to ground level to prevent having to run duct work for many stories.

Accurex's Grease Grabber™ Triple Play and Power Play products are specifically designed to eliminate both smoke and grease particles from your kitchen exhaust system, and odor control modules eliminate or reduce odors to acceptable levels.

Triple Play

The Grease Grabber Triple Play uses a 3-stage mechanical filter arrangement to clean grease and smoke particles from the exhaust air at a low up front cost. Independent pressure switches signal when any of the three filter stages need replacing, taking the guess work out of maintaining the equipment. The Grease Grabber Triple Play incorporates activated carbon panels to remove odor molecules prior to discharging the air, reducing the impact of kitchen exhaust to the surroundings.

Power Play

The Grease Grabber Power Play electrostatic precipitator is the best available technology when it comes to kitchen pollution control. It provides optimum performance with low operating costs. The permanent electrostatic collector section removes grease and smoke particles from the airstream. Additionally, the integrated self-cleaning sequence, initiated by the system controls, readies the Power Play to go to work again without the time and expense of replacing filters. The Power Play incorporates activated carbon panels to remove odor molecules prior to discharging the air, reducing the impact of kitchen exhaust to the surroundings.

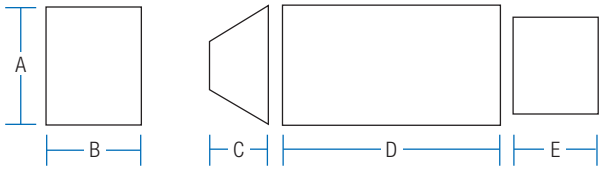
Metal framed filters in extruded aluminum and gasketed tracks prevents air from bypassing the filters.

Internal pressure switches monitor each individual filter stage. A remote filter status indicator panel advises maintenance staff when each filter stage requires replacement.

1. Factory inlet transition fabricated to match ductwork for ease of installation
2. MERV 8 pre-filter removes large particles from the incoming airstream to protect high efficiency filters and minimize maintenance
3. MERV 14 high capacity bag filter removes a large percentage of smaller particles not captured by the pre-filter
4. MERV 16 rigid final filter ensures a minimum overall particulate removal efficiency of 95%
5. Bonded activated carbon filters reduce cooking odors with a generous application of 95 lbs. of carbon per 1,000 cfm of exhaust to maximize performance and minimize maintenance
6. Accurex utility set fan with motor and drive mounted outside of the airstream per NFPA 96. Factory-provided high temperature flex fabric transition.

Optional Items

- MERV 17 HEPA filters available for efficiencies greater than 95%.
- Potassium permanganate and other impregnates available for code compliance and/or to deal with specific odors.
- Accurex inline fan options available to fit specific job needs.
- Unit can be constructed in multiple sections for field assembly if required.



Model XPBRC	Maximum Air Volume[1] (cfm)	A Height (inches)	B Width[2] (inches)	C Inlet Transition[3] (inches)	D Unit Length (inches)	E Outlet Trans/Fan (inches)	Unit Weight (pounds)
-10-10	2,000	34	26.3	18-26	98	52.3	1100
-10-20	4,000	34	50.0	18-26	98	57.8	1600
-10-30	6,000	34	73.7	18-26	98	71.5	2150
-20-20	8,000	58	50.0	18-26	98	72.0	2600
-20-30	12,000	58	73.7	18-26	98	77.8	3500
-20-40	16,000	58	97.4	18-26	98	99.1	4200
-30-30	18,000	82	73.7	18-26	98	78.0	4700
-30-40	24,000	82	97.4	18-26	98	84.1	5700
-40-40	32,000	109	97.4	18-26	98	98.4	7300
-40-50	40,000	109	121.5	18-26	98	104.4	8000

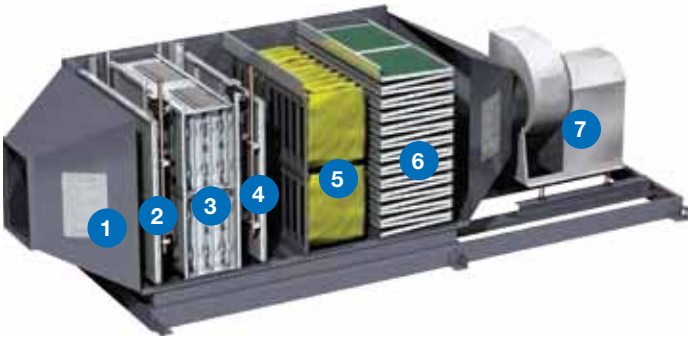
1 Maximum air volume is based on 500 ft./min. air velocity across the precipitator
2 Lifting lugs for the unit add a nominal 4 inches to each side of the unit width
3 Actual dimension based on incoming duct dimension to ensure expansion angles do not exceed 45°

NOTE: Dimensions are subject to change pending final fan selection
NOTE: Type and volume of cooking and cooking fuel must be factored in when selecting unit. Consult factory for final selection.

ETL LISTED US

ANSI/UL 867 Listed

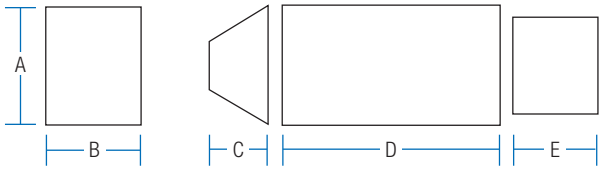
Built in accordance with NFPA 96



Remote mounted control panel is pre-programmed to sequence the wash cycle of the electrostatic collector section at a set schedule, minimizing manual maintenance.

Remote mounted detergent dispenser for the electrostatic collector self-cleaning system. Holds up to 55 gallons for less frequent maintenance.

1. Factory inlet transition fabricated to match ductwork for ease of installation
2. Aluminum mesh pre-filter removes large particles from the incoming airstream prior to reaching the ionizer cell.
3. The electrostatic collector's ionizer imparts a positive electrical charge on the grease and smoke particles as they pass. These particles are then repelled by positively charged plates and collected on negatively charged plates.
4. Aluminum mesh mist eliminator that prevents wash water from entering safety filter and carbon sections.



5. MERV 14 high capacity bag filter acts as a safety filter preventing high amounts of grease from saturating the carbon panels should the unit's ionizer lose power.
6. Bonded activated carbon filters reduce cooking odors with a generous application of 156 lbs. of carbon per 1,000 cfm of exhaust to maximize performance and minimize maintenance.
7. Accurex utility set fan with motor and drive mounted outside of the airstream per NFPA 96. Factory-provided high temperature flex fabric transition.

Optional Items

- MERV 17 HEPA filters available for efficiencies greater than 95%.
- Potassium permanganate and other impregnates available for code compliance and/or to deal with specific odors.
- Accurex inline fan options available to fit specific job needs.
- Unit can be constructed in multiple sections for field assembly if required.

Model XSA	Maximum Air Volume[1] (cfm)	A Height (inches)	B Width[2] (inches)	C Inlet Transition[3] (inches)	D Unit Length (inches)	E Outlet Trans/Fan (inches)	Unit Weight (pounds)
-02-03	2,000	41	42.625	18-26	106.125	58.313	3100
-02-04	2,500	41	54.625	18-26	106.125	65.313	3620
-02-05	3,500	41	65.375	18-26	106.125	65.313	4025
-02-06	4,000	41	77.375	18-26	106.125	67.313	4280
-04-04	5,500	65	54.625	18-26	106.125	76.188	4580
-04-05	6,500	65	65.375	18-26	106.125	78.313	5200
-04-06	8,000	65	77.375	18-26	106.125	83.313	5700
-04-07	9,000	65	89.063	18-26	106.125	83.313	6420
-04-08	10,500	65	101.063	18-26	106.125	96.876	7080
-04-09	12,000	65	112.750	18-26	106.125	101.375	7560
-06-08	16,000	88.875	101.063	18-26	106.125	103.313	8800
-06-09	18,000	88.875	112.750	18-26	106.125	103.313	9510

ETL LISTED US

ANSI/UL 867 Listed

Built in accordance with NFPA 96

1 Maximum air volume is based on 350 ft./min. air velocity across the precipitator
2 Lifting lugs for the unit add a nominal 4 inches to each side of the unit width
3 Actual dimension based on incoming duct dimension to ensure expansion angles do not exceed 45°

NOTE: Dimensions are subject to change pending final fan selection
NOTE: Type and volume of cooking and cooking fuel must be factored in when selecting unit. Consult factory for final selection.

ACCUREX® ENGINEERED RESTAURANT SYSTEMS

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